from 9 km to 59 km were obtained for the heavily and partially frugivorous birds, and these were indeed greater than long distance dispersal threshold of 1 km. Dispersal curves showed that the highest bird ring-recapture frequency from the initial location for all bird species were recorded within 1 km distance class, and these were all less than the predicted mean dispersal distance except for *Sturnus vulgaris*, *Streptopelia capicola* and *Columba guinea*. *S. mauritianum* had greatest seed rain by *Z. pallidus*, *P. capensis* and *C. striatus*, and then followed by *C. monilifera*. There were no differences between the relative seed rain for *O. africana* and *L. camara* probably due to similar fruit architecture. Although the tiny (10.9 g) *Z. pallidus* consumed the largest number of seeds, its seed rain was localised as opposed to that of the relatively bigger (≥ 38 g) *P. capensis* and *C. striatus*. Our results corroborate previous studies emphasising integration of empirical animal movement data in analytical models during investigation of seed dispersal distance. Invasive plant managers must focus on manipulating either bird's alien fruit preference using biological control agents that spoil fruits or their movement by creating more alternative fruit resources with indigenous species since birds may exacerbate invasion success for fleshy-fruited alien plants in South Africa.

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Ethnobotanical database development and screening of medicinal plants in villages under the Jongilanga traditional council, Mpumalanga

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Ethnobotanical survey of medicinal plant use in villages under the Jongilanga traditional council (Mpumalanga) was conducted using semi structured questionnaires, oral interviews and field walks. About 123 plants encompassing 40 families treating various ailments were collected and identified. The plant parts mostly used to treat these ailments are the roots (74%), leaves (3.8%) and the remaining 12.2% includes whole plant, bark and fruits. Decoction and infusion were the most frequently prepared formulations, while other applied preparations including direct application of plant after grinding and maceration are also used. Twenty plants used traditionally in the treatment of oral pathogens were selected and screened for their antimicrobial activity against gram negative bacteria *Prevotella intermedia* and fungus *Candida albicans*. The micro dilution method was used to determine the minimal inhibitory concentration and minimal microbicidal concentration of ethanol extracts prepared. The ethanolic extracts of *Dichrostrachys Cinerea* (1.56-3.13 mg/ml), *Terminalia sericea* (1.56-3.13 mg/ml), *Combretum apiculatum* (3.13 mg/ml), *Faurea saligna* (6.25 mg/ml), *Pappea capensis* (6.25 mg/ml), *Phyllanthus reticulatus* (1.53-6.25 mg/ml), *Ochna natalicia* (3.13-6.25 mg/ml) and *Sphedamnocarpus pruriens* (3.13 mg/ml) showed inhibitory activity against the organisms tested.

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Seed physiological asepcts of selected species of the Kavango Woodland, Namibia

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The high dependency of rural communities on natural forests and woodlands negatively affects tree species such as *Guibourtia coleosperma*, *Pterocarpus angolensis*, *Sclerocarya birrea*, *Schinziophyton rautanenii* and *Strychnos cocculoides* in the Kavango woodland, Namibia. Conservation of indigenous plant species using Genebank methods complements *in situ* conservation of these species. Hence the aim of this study was to establish the viability of seeds of the different species after subjecting it to regular Genebank conditions, i.e. drying to 15% RH and storage at −20 °C. Germination tests were conducted on such treated seeds and seeds kept at "natural" conditions (i.e. neither desiccation nor freezing). The results indicated that there was a significant difference in germination among the species, but in most cases no statistical significant differences in germination rate between the treatments. The Genebank-treated seeds of *Strychnos cocculoides* had a very low germination rate compared to the control, whilst the treated seeds of *Schinziophyton rautanenii* seeds failed to germinate. Thus, only the seeds of *Guibourtia coleosperma*, *Pterocarpus angolensis* and *Sclerocarya birrea* showed some level of tolerance to Genebank methods of drying and storage. The oil content of the different species was also measured and generally it showed low oil content in all the species. The results indicated that *Schinziophyton rautanenii* contains 13% oil, *Sclerocarya birrea* 7%, whilst *Guibourtia coleosperma* and *Strychnos cocculoides* contain less than 6% oil.

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Scotch broom (*Cytisus scoparius*), a horticultural escapee targeted for eradication in South Africa

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Native to Western and Central Europe, Scotch Broom (*Cytisus scoparius*), Fabaceae, has become a major invasive species globally with severe biodiversity and economic impacts in countries like USA, New Zealand, Australia and India. High seed production, a persistent soil seed bank, broad soil and habitat suitability, the ability to fix nitrogen and sexual and vegetative reproduction means that Scotch Broom could also become a widespread and damaging invader in South Africa. Naturalising road side populations in the foothills of the KwaZulu-Natal Drakensberg were repeatedly cleared in the 1980s by digging them out, but in the early 1990s the plants were seen to be re-growing/coppicing from the roots so a foliar herbicide treatment was used. By 2000 the population appeared to have been eradicated from the area but plants have now re-appeared at many of these sites. Either some plants remained or the species re-colonised from the seed bank. Scotch Broom is now also spreading in the Eastern Cape Drakensberg especially in the Hogsback area including Hogsback Forest Reserve. The Early Detection and Rapid Response programme is collating Scotch Broom locality information with the view to initiating a programme aimed at eradicating the species from South Africa.

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